

# STATE OF UTAH GENERAL OUTLOOK

May 1, 2003

## SUMMARY

April showers bring May flowers the saying goes. This year April brought extremely windy conditions and the wind, put a nail in this snowpack coffin. Sublimation is the scientific term for changing a solid to a gas bypassing the liquid phase. It requires phenomenal energy, 8 times more than to just melt snow. Lots of steady, strong wind with warm temperatures is the primary mechanism to deliver that energy to a snowpack. In a normal melt season, Utah loses 10 to 20% of its snowpack to sublimation, it is a natural process with very little we can do to prevent it. From about the 10<sup>th</sup> of April to the 14<sup>th</sup>, there were steady 10 to 40 mph winds with extremely warm temperatures. During this time, what was left of the low elevation snowpack disappeared. Nearly 50% of the mid elevation snowpack, consistently a big water producer, also disappeared. That is a significant amount of snow over a vast geographic region and that kind of snowloss would normally produce a lot of streamflow, but not in this case. An analysis of the event showed that many SNOTEL sites lost between 4 and 6 inches of snow water equivalent over the 5 day period. Most sites gained about 1 to 2 inches of soil moisture during the same period indicating about 1/3 of the snow lost, melted and infiltrated the soil. Calculating runoff from streamflow values indicated that a paltry 0.2 to 0.35 inches of loss made it to the stream. The remaining 2 to 4 inches of snow loss was due to sublimation. To put it simply, a third or more of our snowpack is now completely lost from the system and will not contribute to runoff. In the meantime, the other normal loss rates must still be satisfied, such as the soil moisture deficit. Now the soil moisture deficit becomes a big issue again, because there is only marginally enough snow left to fill it to saturation at most locations. This is being reflected in observed streamflows across the state with most areas still well below average. It is difficult to quantify just how much water was lost across the state during that wind episode. For example, on the Weber River above Oakley, between one quarter and one third (25,000 to 35,000 AF) of the normal April-July runoff was lost during those 4 days. In a year when runoff was expected to be extremely low already, that loss is devastating. As a consequence of that loss combined with struggling streamflows across the state, water supply forecasts have tumbled. Snowpacks now range from 40% to 50% in the north and from 50% to 70% in southern Utah. Precipitation for April was much below to below normal in northern Utah (50%-75%), in the south it was below to near average (65%-90%), bringing seasonal precipitation, (Oct-Apr) to 75%. Reservoir storage in 41 major reservoirs across the state is at 55% of capacity, up only a meager 2% from last month and down 601,000 acre feet from last year, out of a total capacity of 5,470,000, or about 11 %. Reservoir storage is down 1,200,000 acre feet (22%) from 2001 levels, reflecting the persistent nature of this drought.

## SNOWPACK

March first snowpacks as measured by the NRCS SNOTEL system range from 50% to 68% of average in southern Utah. The Sevier has the highest snowpacks at 68% of average and southeast Utah has the lowest at 50% of average. In northern Utah, snowpacks range from a low of 40% on the Weber to 49% on the Provo. Low elevation snowpacks have melted out. Mid elevation snowpacks are nearly gone. Snowmelt is 4 to 6 weeks ahead of average melt and this will simply lengthen summer by a commensurate amount. Statewide, snowpacks are at 50% of average.

## PRECIPITATION

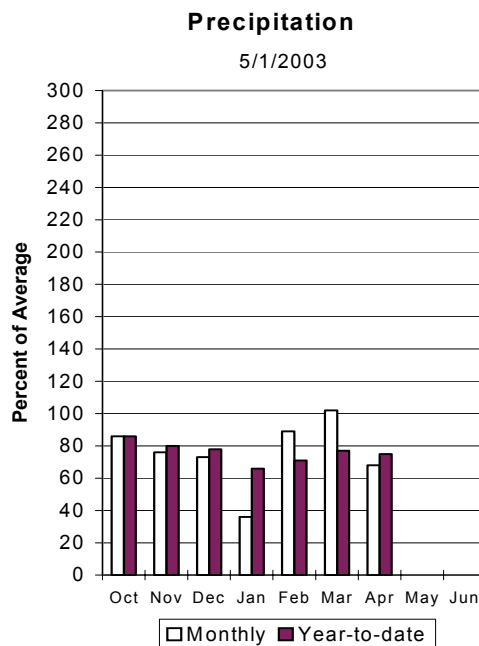
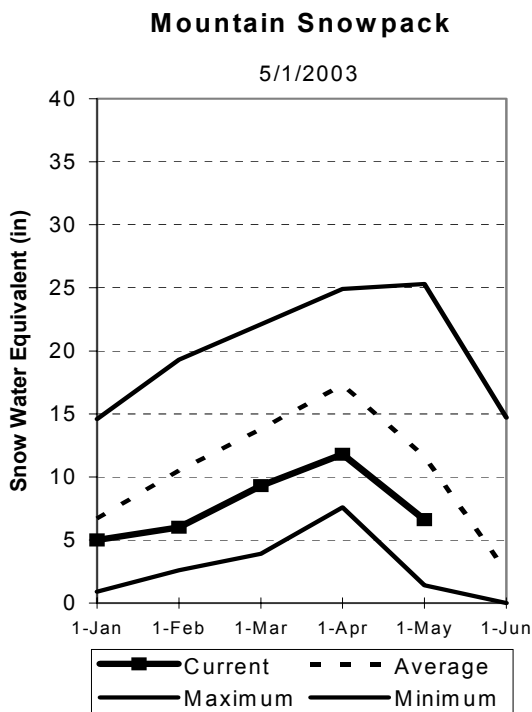
Mountain precipitation during April was much below to below normal (50%-80%) in the north and much below to near normal (65%-90%) in southern Utah. This brings the seasonal accumulation (Oct-Apr) to 75% of average statewide.

## RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 55% of capacity. This is down substantially from last year indicating heavy use of reservoir storage to make up the streamflow deficit. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible.

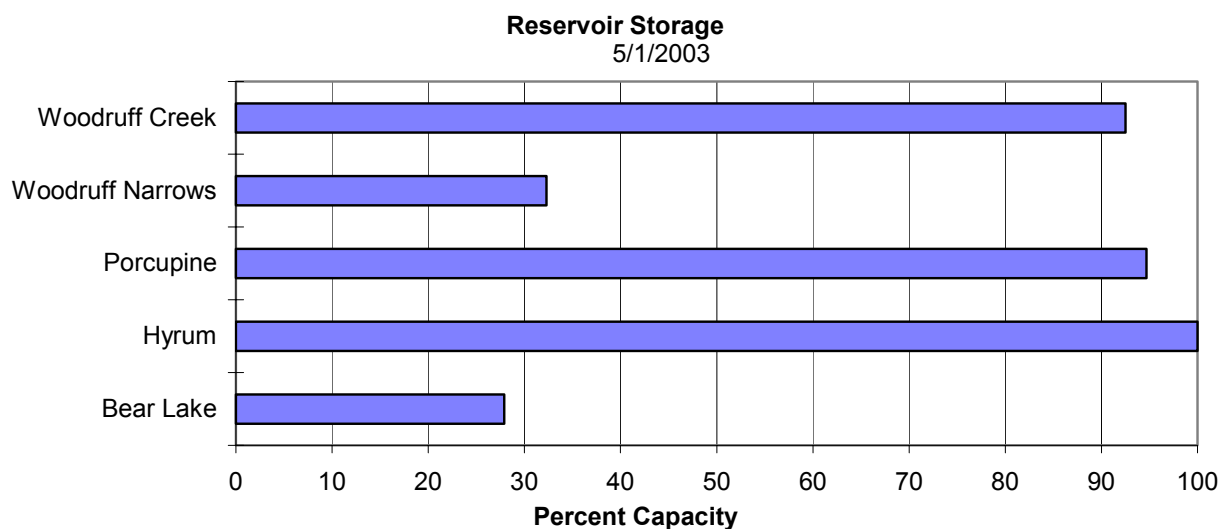
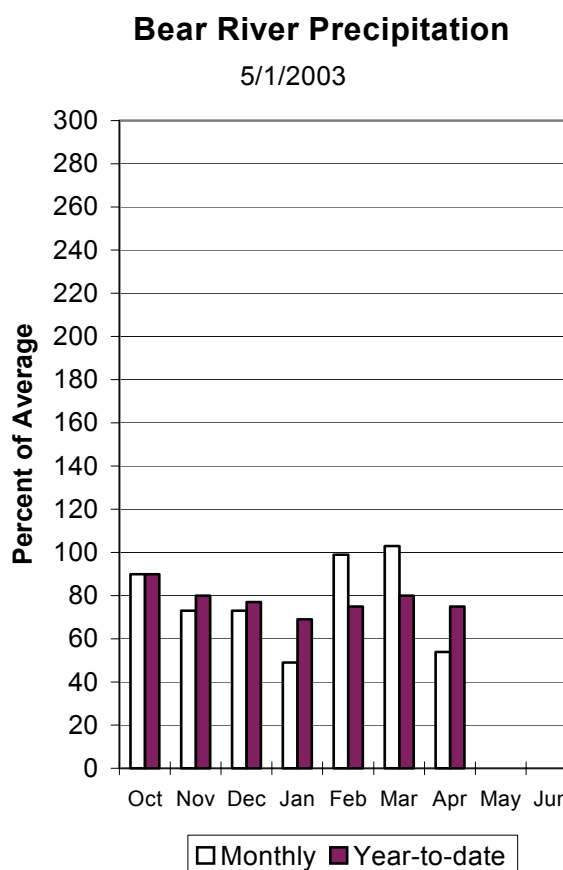
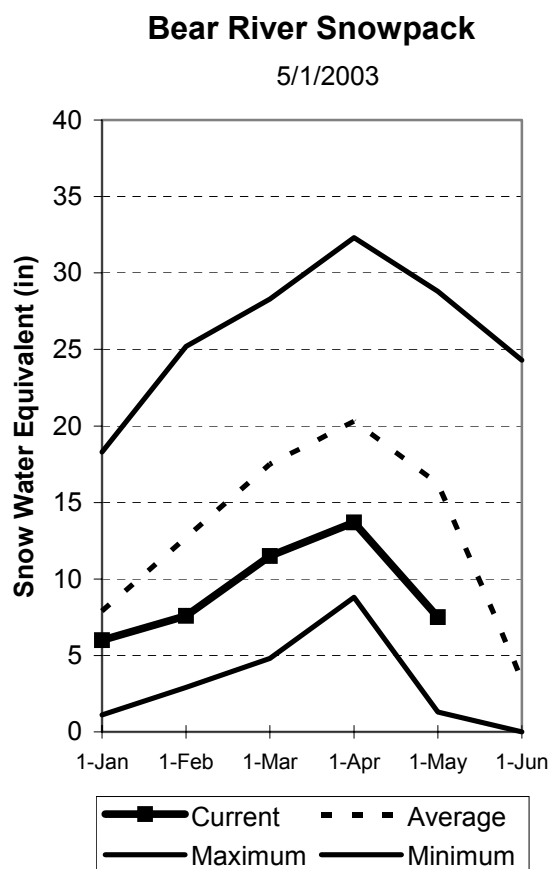
## STREAMFLOW

Snowmelt streamflows are expected to be much below to below average across the entire state of Utah this year. Low snowpacks tend to melt earlier and produce proportionately less runoff. Streams may peak early, have significantly less volume and have short recessions back to base flow. Overall water supply conditions are much below normal.



## Bear River Basin May 1, 2003

Snowpacks on the Bear River Basin are much below average at 46% of normal, about 86% of last year and down 21% relative to last month. Water supply conditions are similar to last year. Specific sites range from 0% to 75% of normal. Bear lake was only able to store 7,000 acre feet this past month. April precipitation was much below average at 54%, which brings the seasonal accumulation (Oct-Apr) to 75% of average. Forecast streamflows are for much below normal volumes this spring. Reservoir storage is at 29% of capacity, 16% (241,000 AF) less than last year. Water supply conditions are much below normal due to low snowpack and low reservoir storage.



BEAR RIVER BASIN  
Streamflow Forecasts - May 1, 2003

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Bear R nr UT-WY State Line	APR-JUL	54	59	62	53	65	70	116
Woodruff Narrows Res inflow	APR-JUL	15.0	25	32	24	40	55	136
Big Creek nr Randolph	APR-JUL	0.34	0.91	1.30	27	2.73	4.84	4.90
Smiths Fork nr Border	APR-JUL	35	41	45	44	50	57	103
Bear River blw Stewart Dam	APR-JUL	22	27	30	10	64	109	288
Little Bear River at Paradise	APR-JUL	9.7	11.3	12.5	27	13.8	16.1	46
Logan River nr Logan	APR-JUL	51	55	58	48	61	66	122
Blacksmith Fork nr Hyrum	APR-JUL	15.3	17.1	18.4	38	19.8	22	48

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of April					BEAR RIVER BASIN Watershed Snowpack Analysis - May 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	396.7	---	---	BEAR RIVER, UPPER (abv Ha	6	77	41
HYRUM	15.3	15.3	15.1	13.2	BEAR RIVER, LOWER (blw Ha	8	88	50
PORCUPINE	11.3	10.7	11.3	9.5	LOGAN RIVER	4	90	65
WOODRUFF NARROWS	57.3	18.5	18.5	38.5	RAFT RIVER	1	67	65
WOODRUFF CREEK	4.0	3.7	3.8	---	BEAR RIVER BASIN	14	83	46

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

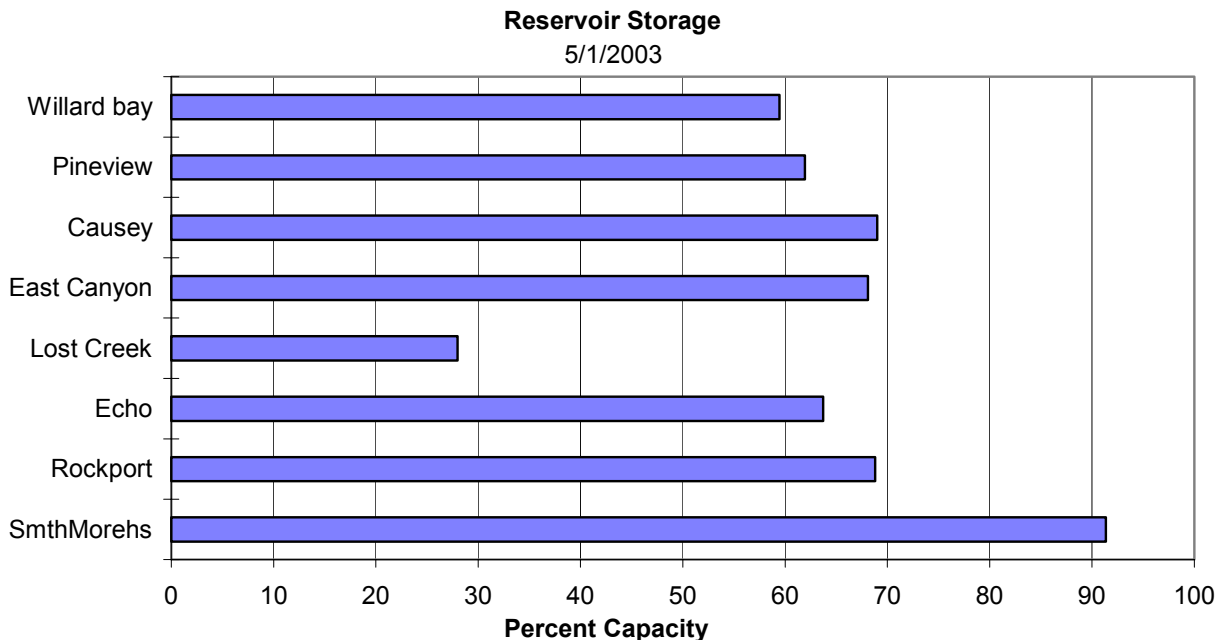
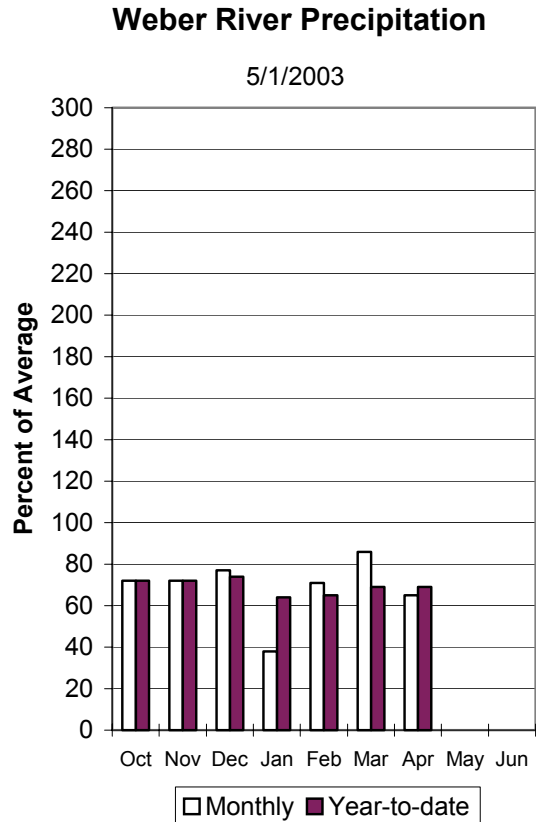
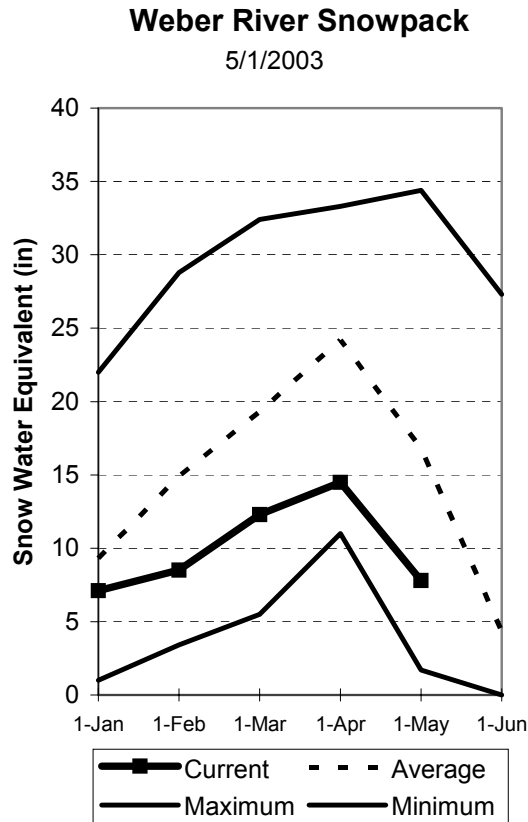
The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
(2) - The value is natural volume - actual volume may be affected by upstream water management.

# Weber and Ogden River Basins

May 1, 2003

Snowpack on the Weber and Ogden Watersheds is much below normal at 40% of average, about 67% of last year and down 20% relative to last month. This is the lowest May 1 snowpack since 1992. Individual sites range from 0% to 71% of average. Soil moisture conditions are somewhat improved from last year and may yield a higher runoff efficiency. Precipitation during April was much below normal at 65%, bringing the seasonal accumulation (Oct-Apr) to 69% of average. Reservoir storage is at 62% of capacity, about 6% (33,000 acre-feet) less than last year. Streamflow forecasts are much below average. Overall water supply conditions are much below normal due to poor snowpack and low reservoir storage.



WEBER & OGDEN WATERSHEDS in Utah  
Streamflow Forecasts - May 1, 2003

		<<===== Drier =====		Future Conditions =====		===== Wetter =====>>			
Forecast Point	Forecast Period	Chance Of Exceeding *		Chance Of Exceeding *				30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Smith & Morehouse Res inflow	APR-JUL	13.9	16.0	18.0	53	20	22	34	
Weber River nr Oakley	APR-JUL	46	55	61	50	67	76	123	
Rockport Reservoir inflow	APR-JUL	43	54	62	46	70	81	134	
Weber River nr Coalville	APR-JUL	44	55	62	45	69	80	137	
Chalk Creek at Coalville	APR-JUL	2.7	10.0	15.0	33	20	27	45	
Echo Reservoir inflow	APR-JUL	51	68	80	45	92	109	179	
Lost Creek Reservoir inflow	APR-JUL	2.9	4.0	4.8	27	5.7	7.2	17.6	
East Canyon Reservoir inflow	APR-JUL	7.4	9.3	10.7	35	12.2	14.6	31	
Weber River at Gateway	APR-JUL	55	89	113	32	137	171	355	
SF Ogden River nr Huntsville	APR-JUL	12.0	16.0	19.0	30	22	26	64	
Pineview Reservoir inflow	APR-JUL	17.0	29	37	28	45	57	133	
Wheeler Creek nr Huntsville	APR-JUL	0.19	1.10	1.80	29	2.50	3.40	6.30	

WEBER & OGDEN WATERSHEDS in Utah  
Reservoir Storage (1000 AF) - End of April

WEBER & OGDEN WATERSHEDS in Utah  
Watershed Snowpack Analysis - May 1, 2003

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	4.9	6.9	4.0	OGDEN RIVER	4	48	31
EAST CANYON	49.5	33.7	35.3	40.5	WEBER RIVER	9	75	46
ECHO	73.9	47.1	50.0	52.9	WEBER & OGDEN WATERSHEDS	13	66	40
LOST CREEK	22.5	6.3	9.8	15.6				
PINEVIEW	110.1	68.2	91.6	77.7				
ROCKPORT	60.9	41.9	32.8	38.6				
WILLARD BAY	215.0	127.8	140.8	168.0				

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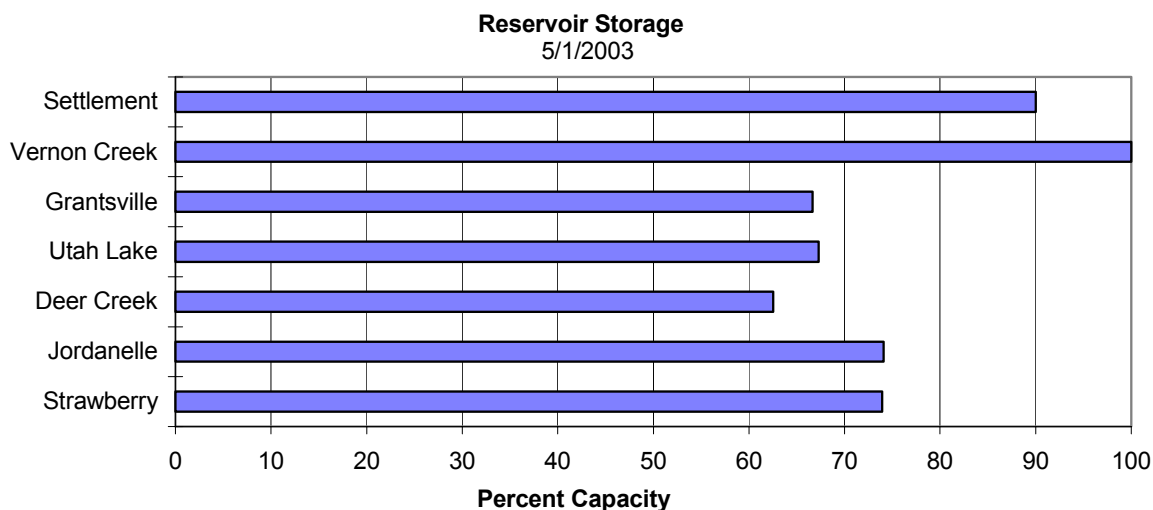
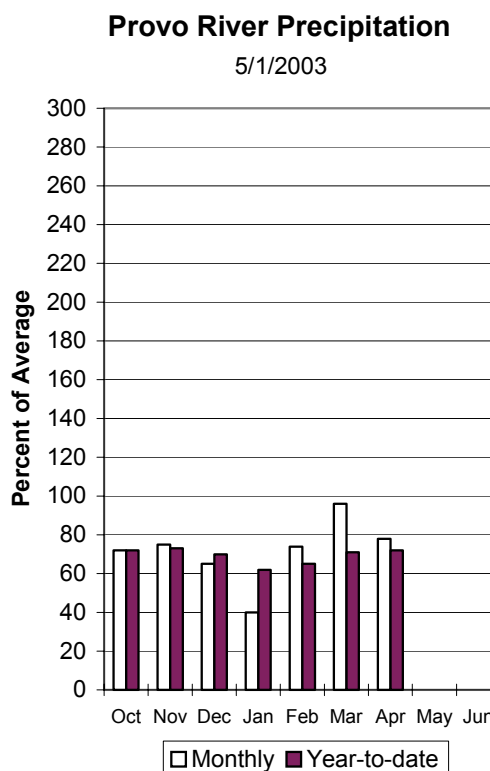
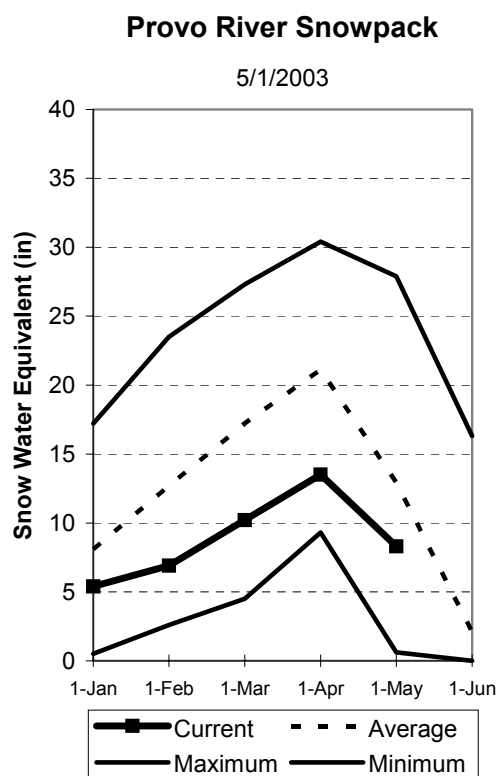
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## Utah Lake, Jordan River & Tooele Valley Basins

### May 1, 2003

Snowpacks over these watersheds are at 49% of average, 87% of last year and down 15% relative to last month. Individual sites range from 0% to 77% of average. This is the lowest May 1 snowpack since 1992. Soil moisture is somewhat improved from last year and may yield a higher runoff efficiency. Precipitation during April was below normal at 78%, bringing the seasonal accumulation (Oct-Apr) to 72% of average. Forecast streamflows are much below normal. Reservoir storage is at 71% of capacity, 8% (196,000 AF) less than last year. General water supply conditions are poor due to low snowpack and low reservoir storage.



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY  
Streamflow Forecasts - May 1, 2003

		<<===== Drier ===== Future Conditions ===== Wetter =====>>							
Forecast Point	Forecast Period			Chance Of Exceeding *				30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Spanish Fork River nr Castilla	APR-JUL	6.9	19.9	26	34	45	68	77	
Provo River nr Woodland	APR-JUL	29	36	45	44	54	69	103	
Provo River nr Hailstone	APR-JUL	15.0	30	41	38	52	76	109	
Provo R blw Deer Creek Dam	APR-JUL	23	38	55	44	72	95	126	
American Fk R nr American Fk	APR-JUL	4.5	7.2	9.5	30	11.8	15.7	32	
Utah Lake inflow	APR-JUL	6.0	64	117	36	170	245	325	
Little Cottonwood Ck nr SLC	APR-JUL	14.4	17.5	20	50	23	26	40	
Big Cottonwood Ck nr SLC	APR-JUL	11.0	15.3	18.0	47	21	25	38	
Mill Creek nr SLC	APR-JUL	0.35	1.40	2.40	34	3.40	4.40	7.00	
Parley's Creek nr SLC	APR-JUL	0.2	3.0	5.7	34	8.4	11.2	16.7	
Dell Fork nr SLC	APR-JUL	0.00	0.75	2.00	29	3.25	5.10	6.80	
Emigration Creek nr SLC	APR-JUL	0.00	0.25	1.30	29	2.35	3.80	4.50	
City Creek nr SLC	APR-JUL	0.26	1.95	3.20	37	4.45	6.10	8.70	
Vernon Creek nr Vernon	APR-JUL	0.19	0.26	0.32	22	0.39	0.53	1.48	
Settlement Creek nr Tooele	APR-JUL	0.32	0.45	0.60	31	0.75	1.06	1.97	
S Willow Ck nr Grantsville	APR-JUL	0.63	1.12	1.46	46	2.19	3.27	3.20	

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY  
Reservoir Storage (1000 AF) - End of April

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY  
Watershed Snowpack Analysis - May 1, 2003

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	93.6	111.0	119.4	PROVO RIVER & UTAH LAKE	7	175	34
GRANTSVILLE	3.3	2.2	2.8	2.8	PROVO RIVER	4	99	25
SETTLEMENT CREEK	1.0	0.9	0.9	0.7	JORDAN RIVER & GREAT SALT	6	66	55
STRAWBERRY-ENLARGED	1105.9	817.7	906.7	663.7	TOOELE VALLEY WATERSHEDS	3	122	52
UTAH LAKE	870.9	585.9	679.4	872.6	UTAH LAKE, JORDAN RIVER &	16	88	47
VERNON CREEK	0.6	0.6	0.6	---				

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

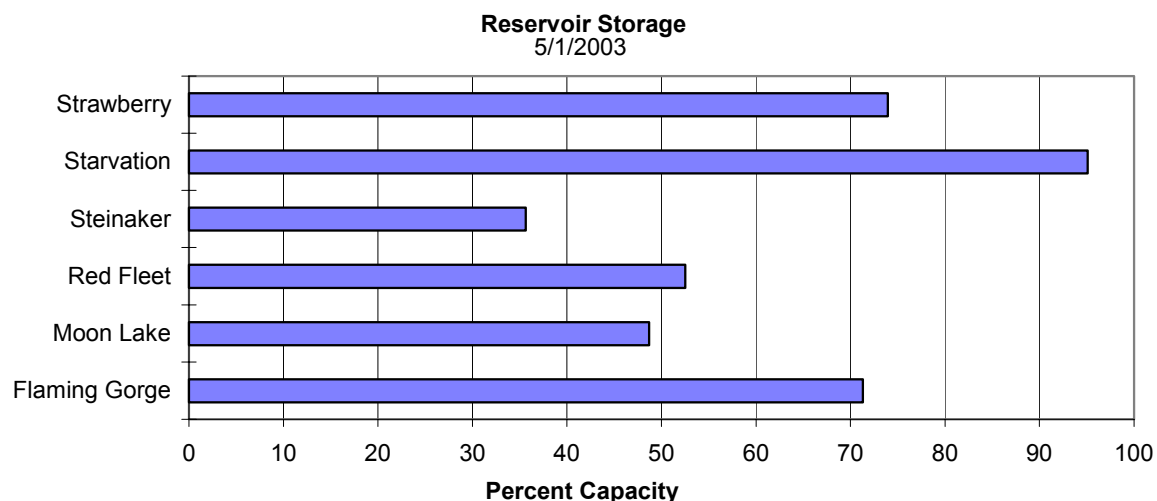
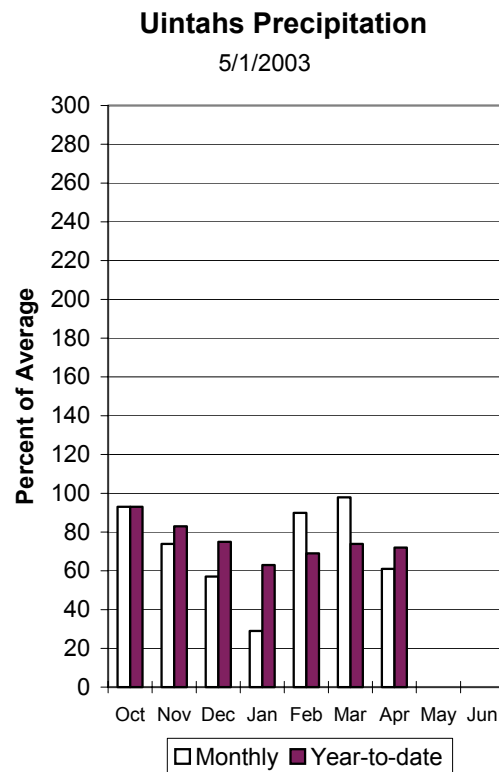
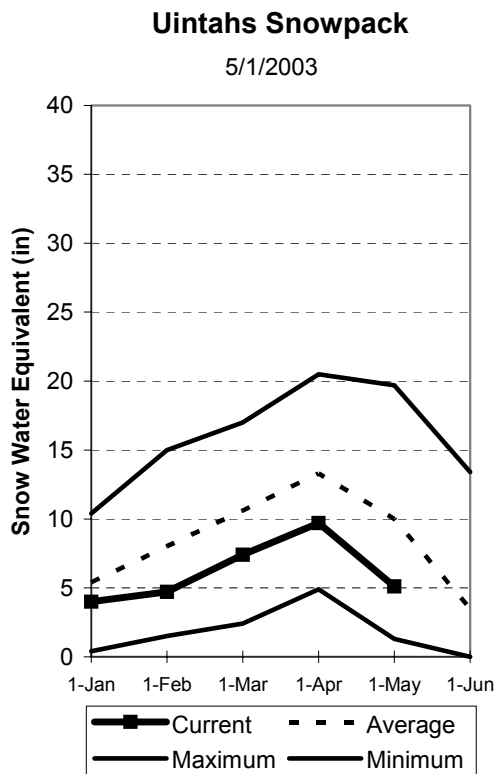
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# **Uintah Basin and Dagget SCD's** **May 1, 2003**

Snowpacks across the Uintah Basin and North Slope areas are much below average at 47%, which is 173% of last year's snowpack and down 26% relative to last month. The North Slope ranges from 0% to 85% and the Uintah Basin ranges from 0% to 73% of average. Soil moisture is somewhat improved over last year and may yield a higher runoff efficiency. Precipitation during April was much below normal at 61%, bringing the seasonal accumulation (Oct-Apr) to 72% of average. Reservoir storage is at 75% of capacity, 8% (110,000AF) less than last year. Springtime runoff conditions are much below normal due to low snowpack and low reservoir storage.



UINTAH BASIN & DAGGET SCD'S  
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions =====		Wetter =====>>		30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Blacks Fork nr Robertson	APR-JUL	40	50	56	59	62	72	95
EF of Smiths Fork nr Robertson	APR-JUL	14.6	16.1	17.2	56	18.4	20	31
Flaming Gorge Reservoir Inflow	APR-JUL	365	515	620	52	725	880	1190
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	5.4	9.3	12.0	57	14.7	19.1	21
Ashley Creek nr Vernal	APR-JUL	15.9	24	29	56	34	42	52
WF DUCHESNE RIVER nr Hanna	APR-JUL	4.2	6.8	9.0	38	11.5	15.6	24
DUCHESNE R nr Tabiona	APR-JUL	35	44	50	48	56	65	105
UPPER STILLWATER RESV inflow	APR-JUL	27	38	45	55	52	63	82
ROCK CK nr Mountain Home	APR-JUL	32	42	49	55	56	66	89
DUCHESNE R abv Knight Diversion	APR-JUL	49	75	92	49	109	135	188
STRAWBERRY RES nr Soldier Springs	APR-JUL	8.9	13.7	17.5	30	22	29	59
CURRANT CREEK RESV Inflow	APR-JUL	3.8	4.6	6.8	27	9.0	12.3	25
STARVATION RESERVOIR inflow	APR-JUL	10.0	28	40	33	52	70	121
Lake Fork River abv Moon Lake	APR-JUL	22	30	36	53	42	50	68
Yellowstone River nr Altonah	APR-JUL	15.0	25	32	52	39	49	62
DUCHESNE R at Myton	APR-JUL	13.0	22	60	23	98	154	260
Whiterocks River nr Whiterocks	APR-JUL	9.3	19.3	26	46	33	43	56
DUCHESNE R nr Randlett	APR-JUL	13.0	42	75	23	166	303	325

UINTAH BASIN & DAGGET SCD'S  
Reservoir Storage (1000 AF) - End of April

UINTAH BASIN & DAGGET SCD'S  
Watershed Snowpack Analysis - May 1, 2003

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	2673.0	2820.0	2952.0	UPPER GREEN RIVER in UTAH	6	179	45
MOON LAKE	49.5	24.1	18.1	30.8	ASHLEY CREEK	2	0	18
RED FLEET	25.7	13.5	19.2	19.9	BLACK'S FORK RIVER	2	145	71
STEINAKER	33.4	11.9	21.5	25.0	SHEEP CREEK	1	0	0
STARVATION	165.3	157.2	163.5	139.7	DUCHESNE RIVER	11	169	48
STRAWBERRY-ENLARGED	align="right">1105.9	align="right">817.7	align="right">906.7	align="right">663.7	LAKE FORK-YELLOWSTONE CRE	4	154	68
					STRAWBERRY RIVER	4	0	9
					UINTAH-WHITEROCKS RIVERS	2	214	37
					UINTAH BASIN & DAGGET SCD	17	172	47

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

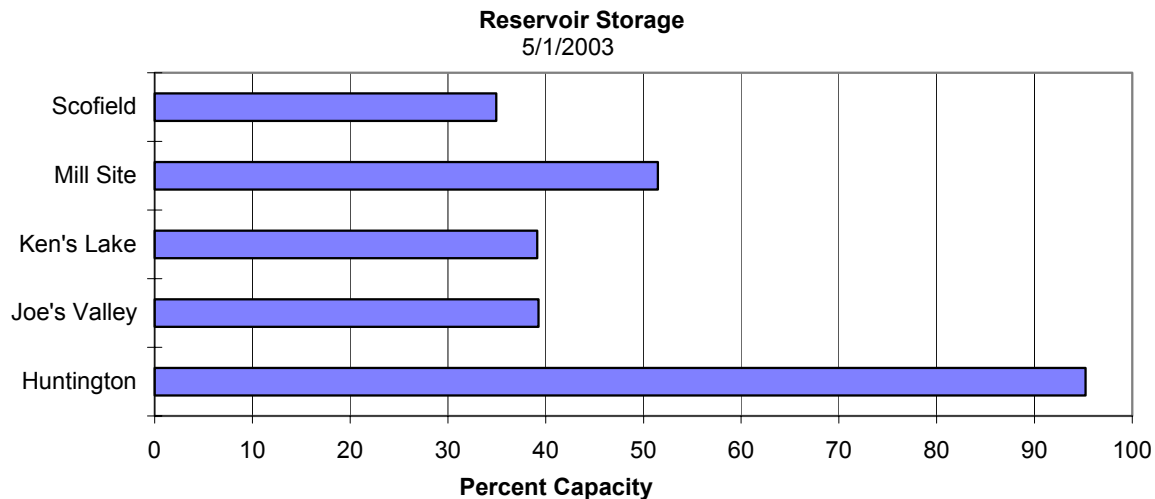
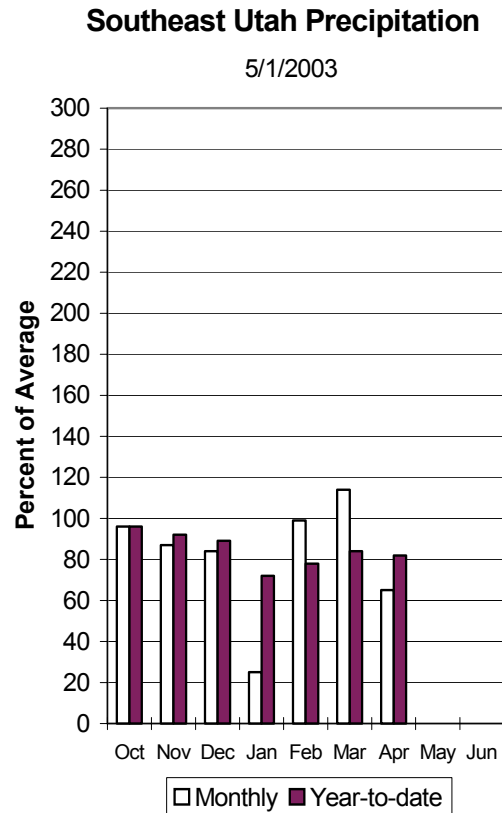
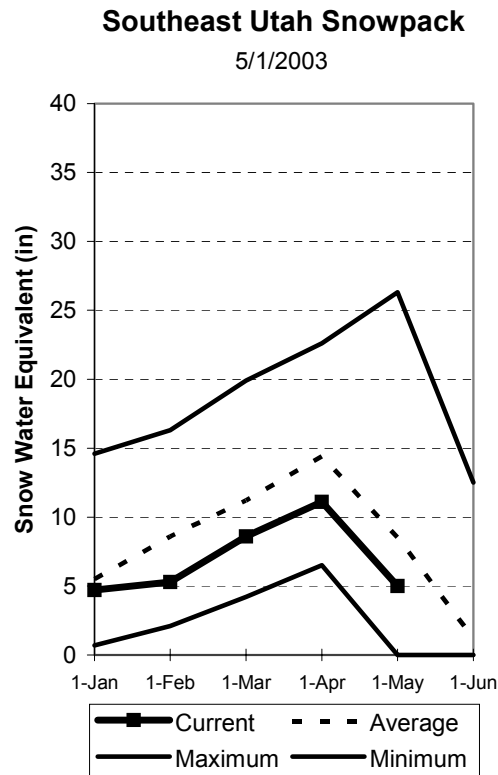
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# Carbon, Emery, Wayne, Grand and San Juan Co. May 1, 2003

Snowpacks in this region are much below normal at 50% of average, about 531% of last year and down 27% relative to last month. Individual sites range from 0% to 94% of average. Soil moisture is somewhat improved over last year and may yield a higher runoff efficiency. Precipitation during April was much below average at 65%, bringing the seasonal accumulation (Oct-Apr) to 82% of normal. Reservoir storage is at 40% of capacity, 16% (24,000AF) less than last year. General runoff and water supply conditions are much below normal due to low snowpack and low reservoir storage.



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.  
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions =====		Wetter =====>>		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	Chance Of Exceeding * (% AVG.)	30% (1000AF)	10% (1000AF)	
Gooseberry Creek nr Scofield	APR-JUL	4.2	5.9	7.0	59	8.1	9.8	11.9
Scofield Reservoir inflow	APR-JUL	23	27	30	65	33	37	46
White River blw Tabbyune Creek	APR-JUL	4.8	6.8	8.4	48	10.1	13.0	17.4
Green River at Green River, UT	APR-JUL	1100	1610	1950	62	2290	2800	3170
Electric Lake inflow	APR-JUL	5.8	7.3	8.5	54	9.8	11.9	15.7
HUNTINGTON CK nr Huntington	APR-JUL	24	29	32	64	35	40	50
JOE'S VALLEY RESV Inflow	APR-JUL	12.0	22	29	50	36	46	58
Ferron Creek nr Ferron	APR-JUL	17.4	20	22	56	24	27	39
Colorado River nr Cisco	APR-JUL	2620	3200	3600	77	4000	4580	4650
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	0.50	1.25	2.00	40	2.80	3.90	5.00
Seven Mile Creek nr Fish Lake	APR-JUL	3.90	5.10	6.00	86	6.90	8.10	7.00
Muddy Creek nr Emery	APR-JUL	7.8	10.9	13.0	65	15.1	18.2	19.9
North Ck ab R.S. nr Monticello	MAR-JUL	0.02	0.16	0.33	24	0.57	1.04	1.35
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.07	0.18	0.33	25	0.52	0.89	1.31
Recapture Ck bl Johnson Ck nr Blandi	MAR-JUL	0.24	0.61	1.25	21	2.45	4.15	6.10
San Juan River nr Bluff	APR-JUL	235	375	475	39	575	715	1230

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.  
Reservoir Storage (1000 AF) - End of April

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.  
Watershed Snowpack Analysis - May 1, 2003

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	4.0	3.5	4.1	PRICE RIVER	3	381	62
JOE'S VALLEY	61.6	24.2	37.7	41.9	SAN RAFAEL RIVER	3	461	62
KEN'S LAKE	2.3	0.9	1.1	1.6	MUDDY CREEK	1	0	39
MILL SITE	16.7	8.6	9.2	99.7	FREMONT RIVER	3	0	41
SCOFIELD	65.8	23.0	33.5	37.4	LASAL MOUNTAINS	1	0	20
					BLUE MOUNTAINS	1	0	0
					WILLOW CREEK	1	0	0
					CARBON, EMERY, WAYNE, GRA	13	533	50

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

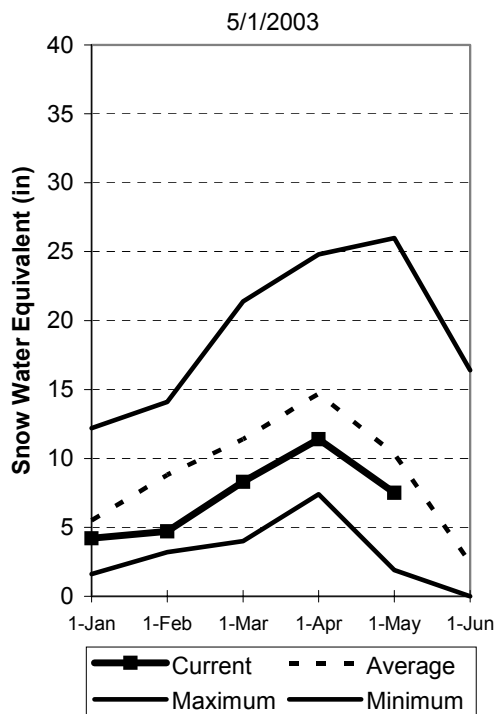
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
(2) - The value is natural volume - actual volume may be affected by upstream water management.

## Sevier and Beaver River Basins

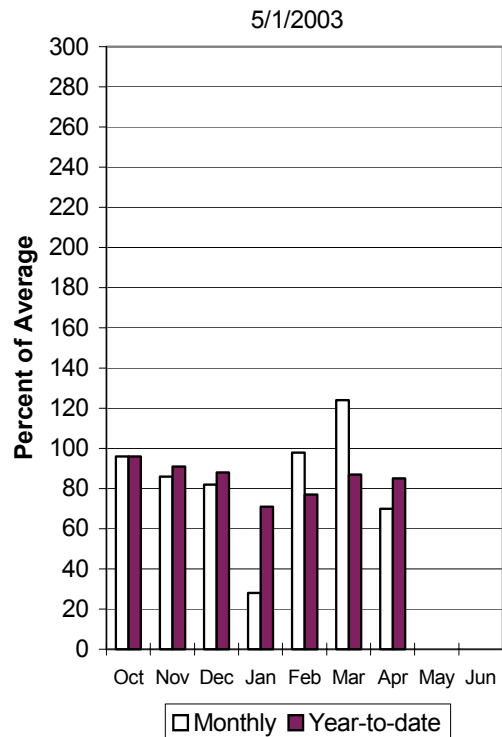
### May 1, 2003

Snowpacks on the Sevier River Basin are much below normal at 68% of average, about 473% of last year and down 9% relative to last month. Individual sites range from 0% to 114% of average. The lack of low elevation snow may impact runoff. Soil moisture is somewhat improved over last year and may yield a higher runoff efficiency. Precipitation during April was below average at 70% of normal, bringing the seasonal accumulation (Oct-Apr) to 85% of average. Reservoir storage is at 42% of capacity, 15% (61,000AF) less than last year. Water supply conditions and streamflow forecasts are much below normal due to low snowpack and low reservoir storage.

#### Sevier River Snowpack

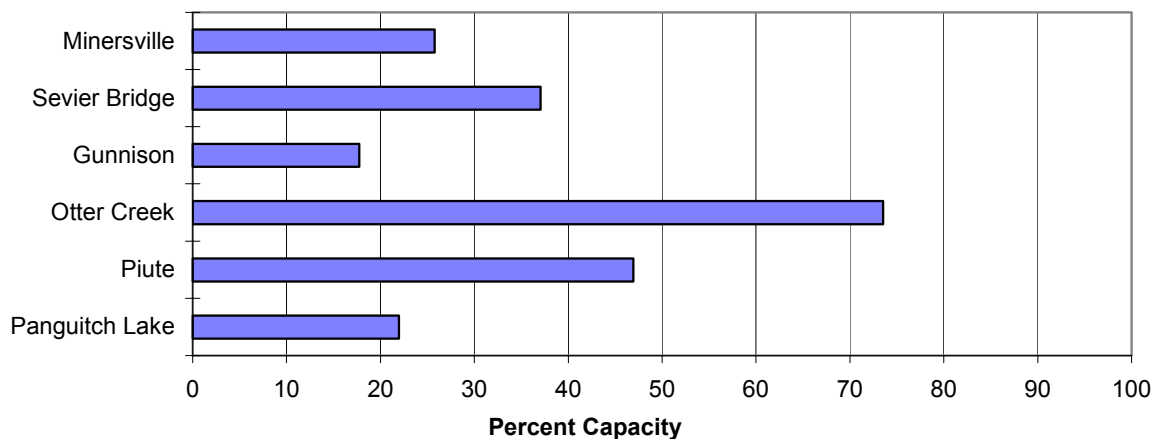


#### Sevier River Precipitation



#### Reservoir Storage

5/1/2003



SEVIER & BEAVER RIVER BASINS  
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *		Chance Of Exceeding *		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Sevier River at Hatch	APR-JUL	12.6	23	29	53	35	45	55
Sevier River nr Kingston	APR-JUL	14.2	35	45	51	55	76	89
EF Sevier R nr Kingston	APR-JUL	0.8	12.6	20	53	27	39	38
Sevier R blw Piute Dam	APR-JUL	1.0	38	58	46	78	115	126
Clear Creek nr Sevier	APR-JUL	3.5	9.5	12.0	55	14.5	21	22
Salina Creek at Salina	APR-JUL	MUCH BELOW AVERAGE						19.7
Sevier R nr Gunnison	APR-JUL	50	38	123	44	208	340	280
Chicken Creek nr Levan	APR-JUL	0.67	0.81	0.93	21	1.07	1.30	4.50
Oak Creek nr Oak City	APR-JUL	0.46	0.56	0.63	39	0.71	0.86	1.63
Beaver River nr Beaver	APR-JUL	10.7	12.5	14.0	54	15.6	18.4	26
Minersville Reservoir inflow	APR-JUL	4.6	6.1	7.5	45	8.8	11.0	16.6

SEVIER & BEAVER RIVER BASINS Reservoir Storage (1000 AF) - End of April					SEVIER & BEAVER RIVER BASINS Watershed Snowpack Analysis - May 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	3.6	5.8	15.7	UPPER SEVIER RIVER (south	8	0	57
MINERSVILLE (RkyFd)	23.3	6.0	9.1	18.0	EAST FORK SEVIER RIVER	3	0	42
OTTER CREEK	52.5	38.6	40.1	46.0	SOUTH FORK SEVIER RIVER	5	0	65
PIUTE	71.8	33.7	44.3	55.5	LOWER SEVIER RIVER (inclu	6	359	76
SEVIER BRIDGE	236.0	87.4	127.3	183.6	BEAVER RIVER	2	248	71
PANGUITCH LAKE	22.3	4.9	12.3	164.6	SEVIER & BEAVER RIVER BAS	16	484	68

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

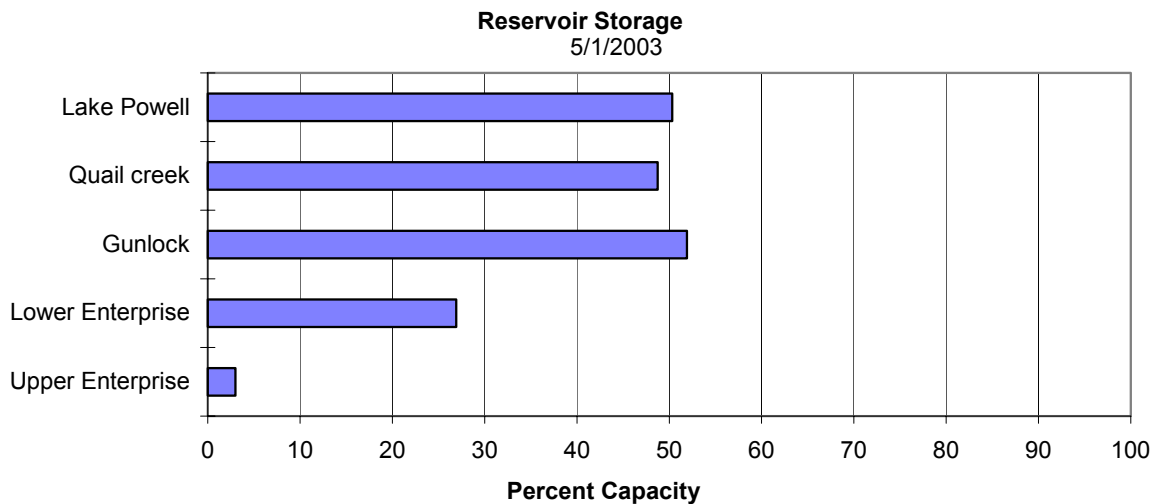
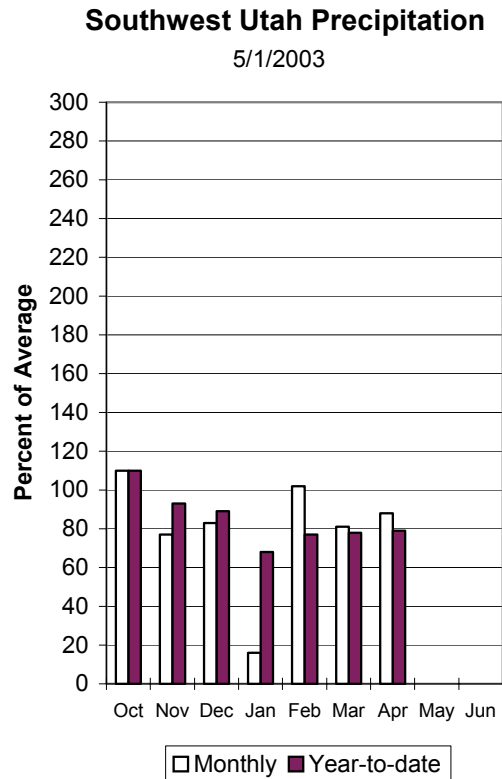
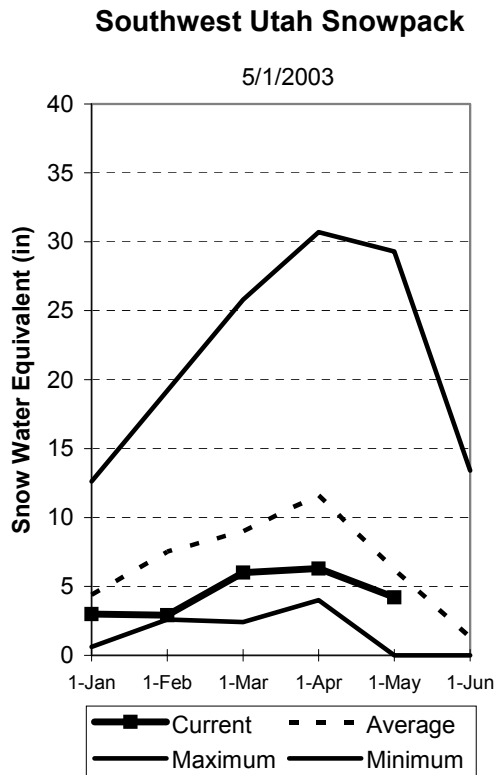
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

## E. Garfield, Kane, Washington, & Iron co. May 1, 2003

Snowpacks in this region are at 58% of average, up 4% relative to last month. Last year at this time snowpacks were completely melted out. Individual sites range from 0 to 80% of average. Snowmelt may last only through mid to late May in this area. Soil moisture is somewhat improved over last year and may yield a higher runoff efficiency. Precipitation was slightly below normal during April at 88% of average, bringing the seasonal accumulation (Oct-Apr) to 79% of normal. Reservoir storage is at 41% of capacity, 22% (14,000AF) less than last year. General water supply conditions and streamflow forecasts are much below normal.



E. GARFIELD, KANE, WASHINGTON, & IRON Co.  
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions =====		Wetter =====>>		30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Lake Powell inflow	APR-JUL	2560	3710	4500	57	5290	6440	7930
Virgin River nr Virgin	APR-JUL	16.8	22	25	39	29	45	64
Virgin River nr Hurricane	APR-JUL	7.8	13.9	18.0	26	22	30	69
Santa Clara River nr Pine Valley	APR-JUL	1.17	1.74	2.20	40	2.71	3.55	5.50
Coal Creek nr Cedar City	APR-JUL	1.5	7.1	8.4	44	9.8	15.2	19.3

E. GARFIELD, KANE, WASHINGTON, & IRON Co.  
Reservoir Storage (1000 AF) - End of April

E. GARFIELD, KANE, WASHINGTON, & IRON Co.  
Watershed Snowpack Analysis - May 1, 2003

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNLOCK	10.4	5.4	6.3	4.3	VIRGIN RIVER	5	0	61
LAKE POWELL	24322.0	12238.0	16704.0	---	PAROWAN	2	0	61
QUAIL CREEK	40.0	19.5	32.5	31.6	ENTERPRISE TO NEW HARMONY	2	0	0
UPPER ENTERPRISE	10.0	0.3	0.5	---	COAL CREEK	2	0	62
LOWER ENTERPRISE	2.6	0.7	0.5	115.5	ESCALANTE RIVER	2	0	51
					E. GARFIELD, KANE, WASHIN	9	0	58

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
(2) - The value is natural volume - actual volume may be affected by upstream water management.